NORTH LITTLE LAKE

LOCATION: Upper portion of the coastal zone on the east side of Bayou Lafourche. Discrete boundaries include Bayou Perot on the east, Lake Salvador on the north, the Delta Farms levee and the South Lafourche levee system to the west and Clovelly EMU and the Clovelly Farms and Scully Canal to the south.

SOILS: Organic wetland soils underlay the entire management unit. Under the brackish marsh areas are organic layers of peat underlain by clay. The same is true for the fresh marsh developed soils.

VEGETATION: Vegetation ranges from brackish marsh through most of the south and east portions of the unit to fresh marsh in the northwestern section. Some spoil bank vegetation, primarily shrub and woody succession vegetation has crown up along the older spoil banks in the intensively channeled areas.

SUBSIDENCE POTENTIAL IF DRAINED: The entire study unit has a very high subsidence potential (greater than 51 inches).

LAND LOSS POTENTIAL DUE TO CHANNEL CONSTRUCTION: High, due to the nature of the soils. A large acreage of land in the northeast corner along Bayou Perot has been lost to channelization.

TOPOGRAPHIC FEATURES: The North Little Lake Study Unit is a low lying (less than 1 foot MSL) marshland. Spoil deposits add relief along canals in the Delta Farms and Rest Delta Farms Oil Field, and the Little Temple Oil and Gas Field in the eastern part of the study unit. Several pipeline canals cross the study unit from the Cut Off Oil and Gas Fields, and the Bayou Poignard Gas Field to Little Lake and the Intracoastal Canal. The largest area of channeling is along Bayou Perot in the Delta Farms and West Delta Farms Petroleum Fields.

FLOODING POTENTIAL: The entire area is flood prone.

IMPORTANT FARMLANDS: None

USE OF LAND: The area is wetland in a semi-altered state. Much of the land has been devoted to mineral extraction. The Intracoastal Waterway, forming the northern boundary of the study unit, is an important interstate shipping link. The entire Little Lake area is important for its trapping and fisheries resources. Land is primarily brackish marsh in a semi-altered state. Some fresh marsh area occurs in the northwest portion of the unit. The West Delta Farms, Little Temple, and Cut Off Oil and Gas Field areas have been channelized extensively and the marsh is undergoing deterioration. The marsh immediately east of Delta Farms is in fairly good condition. There are extensive spoil banks along the Intracoastal Waterway and in the oil and Gas fields. Some of these banks have been colonized with brushy or shrub vegetation. Elevations in the unit are at or near sea level.

UNIQUE ECOLOGICAL FEATURES:

1. **Geological Features:** None
2. **Botanical Features:** None
3. **Zoological Features:**
    1. **Mid-Barataria Basin:** This area is a large land and water mass in Lafourche and Jefferson Parish. Flood protection levees and east-west channeling have added to land loss and saltwater intrusion problems. The Barataria Basin represents a typical nursery Around for many of the important commercial fisheries' species, included menhaden, shrimp, and blue crab.

RECREATIONAL POTENTIAL: Little Lake is considered an excellent area for hunting, fishing, and banning. Camps are found scattered through the study unit.

HYDROLOGIC RESOURCES: Freshwater grades down to saltwater at varying depths of one-hundred (100) to four-hundred (400) feet. Water is excellent for fish, shellfish, and wildlife propagation and secondary contact recreation.

HISTORIC/ CULTURAL/ARCHEOLOGICAL:

1. Historic Sites: None
2. Cultural Sites: None
3. Archeological Sites
    1. LF 18 Known Shell Midden Northwest Shore of Little Lake
    2. LF 19 Known Shell Midden Northwest Shore of Little Lake
    3. LF 20 Known Shell Midden Northwest Shore of Little Lake
    4. LF 22 Known Shell Midden Northwest Shore of Little Lake
    5. LF 23 Known Shell Midden Northwest Shore of Little Lake
    6. LF 89 Known Shell Midden on south shore of Lake Salvador
    7. LF 91 Known Shell midden on south shore of Lake Salvador
    8. LF 13 Known Shell Midden on south shore of Lake Salvador
    9. LF 29 Known Shell Midden on south shore of Lake Salvador
    10. LF 14 Known Shell Midden on south shore of Lake Salvador

GOALS:

1. Slow down the rate of saltwater intrusion into the northwestern portion of the EMU
2. Maintain the integrity of the relatively undisturbed fresh/ brackish marsh area in the central portion of the EMU by imposing mitigation conditions on any dredge and fill permits issued in this area that retard marsh deterioration
3. Reduce erosion and new channelization in the Little Temple, West Delta Farms, and Cut Off Oil and Gas Fields
4. Rebuild marshland in the oil fields mentioned in Goal 3 whenever feasible by mitigation conditions applied to new CUP permits issued in these areas

5. Utilize the Intracoastal Waterway as a barrier to further saltwater intrusion to the north of the EMU

POLICIES:

This EMU is exclusively wetland, primarily fresh-brackish marshland. The North Little Lake area is suffering problems of saltwater intrusion and land deterioration along its north, east, and southern flank in 4 areas:

1. West Delta Farms Oil and Gas Field
2. Little Temple Oil and Gas Field
3. Cut Off Oil and Gas Field
4. Gulf Intracoastal Waterway

Several of the following policies deal with halting or at least reducing land loss and saltwater intrusion problems into the interior portion of this unit (which is not as extensively channelized.)

1. All General Policies for the Lafourche Coastal Zone shall apply in this EMU, unless modified by specific EMU or sub-EMU policies stated in this EMU policy statement.
2. Along the Intracoastal Waterway, permits for dredging should require that any spoil be placed continuously on the north side of this canal to retard saltwater intrusion north of this area.
3. In the West Delta Farms Oil and Gas Field, Little Temple Oil and Gas Field, and Cut Off Oil and Gas Field as outlined on the EMU Land Cover Map, any permits for dredging and filling activities should require that dredged materials shall be spread so as to create new marsh sites whenever possible instead of placing spoil on adjacent wetlands. This means placing spoil in eroding wetlands so as to create new sites for marsh regeneration.
4. Along the north, west, and southern portion of the West Delta Farms Oil and Gas Field, the north and west perimeter of the Little Temple Oil and Gas Field and the east perimeter of the Cut Off Oil and Gas Field, permits issued for dredge and fill activities should require that spoil banks be placed continuously along the outside banks of any new canals dredged on the perimeter of these three fields so as to retard the spread of marsh erosion and saltwater intrusion into the central portion of the EMU.
5. Within the portion of the Little Lake EMU outside of the three major oil and gas fields, permits for dredge and fill activities should require that spoil be spread out so as not to form a spoil bank but instead to serve as a base for new marsh growth in areas suffering erosion.
6. Along or near the perimeter specified in Policy 4, outside the oil and gas areas, the same conditions should apply in Policy 4 regarding the creation of spoil banks to retard saltwater intrusion.
7. Existing canals should be used wherever possible to access new drilling sites in the three oil fields occurring in this EMU New dredging should be kept to an

absolute minimum here and subject to conditions stated elsewhere in these policies.

8. All canals dredged for any purposes throughout the EMU should be plugged with earth or rip rap after abandonment to reduce the effects of saltwater intrusion as per Lafourche Coastal Zone General Policies 2 and 3. This especially applies to canals emanating from the south and east portion of the EMU.
9. Any additional reclamation activities in the fresh or brackish marsh areas adjacent to existing reclaimed areas should be discouraged due to poor soil conditions.
10. Several canals are recommended for earthen dams or plugs as per General Policy 2 and 3 of the Lafourche Coastal Zone Program as indicated on the EMU overlay map.
    Any new major permits issued nearby to this area should require as part of all of the mitigation requirements the participation in the construction of dams on one or more of the proposed dam sites as indicated on the EMU map overlay.
11. There shall be no illegal dumping in this EMU of any liquid or solid waste. Existing tank storage sites and well sites shall follow all applicable guidelines as specified by the Louisiana Department of Natural Resources regarding the storing and disposal of wastes from mud pits, well construction, etc.
12. Permanent human habitation dwellings should be discouraged throughout this EMU due to severe flooding potential from storms, and lack of adequate water and sewerage facilities. Any permits associated with recreational or any other type of permanent dwellings shall require adequate on site sewerage and proof' of compliance with solid waste disposal and collection regulations of Lafourche Parish.

Besides these guidelines, all coastal use guidelines as stated in the F.E.I.S. of the Louisiana Coastal Zone Management Program shall apply to this EMU

Where EMU policies refer to a "use of state concern", the policies are intended only as recommendations to the state program managers and are not legally binding on the permit applicant or the state CZM program